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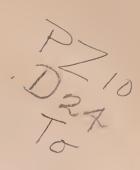




Commy Ciptoe Written by Harriet Ide Eager Davis Pictures by Edna Cooke



Alfred A. Knopf New York 1924



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A Letter To All the Tiptoe Children in the World

Dear other-Tiptoes-besides-Tommy,

I am the person who wrote this book for you. I want to tell you that every interesting thing Tommy learns here about Nature is really true. A scientist who writes insect-books for grown people read Tommy Tiptoe and he said everything is right. Of course the parts about Tommy getting little and the insects talking is just imagining, but that only makes it more fun, don't you think so?

Good-by, other Tiptoes!

HARRIET IDE EAGER.

P.S. Please, every child who reads this book, write me what adventures you want Tommy to have next. Address Miss Eager, care of Alfred A. Knopf, New York City.



There was once a boy named Thomas. Whenever Thomas was *very* much interested in something, he stood on his tiptoes. So his friends called him Tommy Tiptoe.

If you will be his friend you may call him Tommy Tiptoe too.

One day a Lady-bug flew on Tommy's hand. She was a pretty Lady-bug. She wore a shiny red dress with black spots.

Thomas—oh, excuse me! Of course, I mean Tommy Tiptoe. I forgot you are his friend—Tommy Tiptoe blew on the Ladybug:



"Pf-f-f-f!" Then he sang:

"Lady-bug, Lady-bug,
Fly away home!
Your house is on fire
Your children all gone!"

Then Tommy had a great surprise. He heard a little buzzing voice singing:

"Tommy-Tom, Tommy-Tom, What do you know Of lady-bug homes Where the baby-bugs grow,

TOMMY TIPTOE Why lady-bugs come And where lady-bugs go?"

It was the Lady-bug singing!

And the next thing Tommy knew, he was smaller than the Lady-bug. She was holding him fast in her legs. She was flying to her home!

Where do you suppose the Lady-bug's home was?

You could never guess.

On the nearest rose-bush!

The bush was full of red roses. It looked almost as if it were on fire.

Tommy Tiptoe was so little now that the tiniest twig of the rose-bush looked like a giant tree trunk. The leaves were as big as elephant ears. The red roses smelled so sweet they scared him. They were bigger than the biggest giant cabbages you could imagine. The Lady-bug's red back looked like an automobile top.

Tommy stared at the Lady-bug. He could see now that she had two big shiny eyes.

From between her eyes grew two feelers.

"Oh, oh, Mrs. Lady-bug!" cried Tommy. "I can count—one, two, three, four, five, six, seven black spots on your back. And—one, two, three, four, five, six legs. Oh, you have black and blue and red spots on your legs.

"Are your little children pretty, like you, Mrs. Lady-bug?"

"Look!" buzzed the Lady-bug, waving one of her six legs proudly.

Tommy looked. There on the rose-bush twig lay twenty funny little balls, stuck together.

"My eggs," explained the Lady-bug. "Soon they will turn to grubs."

"What are grubs?" asked Tommy Tiptoe.

"People have babies. Insects have grubs," said the Lady-bug. "After a month each of my grubs will turn to a chrysalis."

"What's a chrysalis?" asked Tommy Tiptoe.

"A grub grows into a chrysalis the way a baby grows into a boy or girl," said the Lady-

bug. "Haven't you ever seen a caterpillar? Well, that's the chrysalis of a butterfly. After a while my chrysalis children will have wings. Then they will be real grown-up Lady-bugs like me. That will be my time to die—but I shall not mind it a bit. Oh, excuse me a minute!" buzzed the Lady-bug.

Tommy saw some small green insects with long mouths like needles. They were boring into the rose stems and sucking up the juice.

Whiff! The Lady-bug pounced on one green insect and ate him up. Whiff! The Lady-bug pounced on another insect and ate him up. Whiff! she pounced on another and another, until there were none left.

Then she flew back to Tommy.

"Ugh!" she shivered. "Ugh! Horrid aphids! I hate 'em. Sucking up all the nice sap that makes the roses come. Killing all my beautiful roses before they are born. Ugh!"

Tommy had heard his mother talk about the aphids that hurt her rose-bushes, but

he had never seen a real live one before.

"Why, Mrs. Lady-bug!" cried Tommy, standing on his tippest toes. "Why, I didn't know you were good for anything!"

"Huh!" buzzed the Lady-bug angrily. "Huh! Why I began to eat aphids the first minute I hatched from an egg into a grub. Why, I can eat forty aphids in one hour. Why, my own father and mother and grandfather and grandmother ate aphids up to the day of their death!"

Before Tommy could answer, a big shadow came over the rose-bush. Then a giant red hand, with five red giant fingers, touched their twig. The giant fingers brushed off the twenty eggs. Then the shadow moved away.

Poor Mrs. Lady-bug began to cry and to wail.

"Oh-h-h-h!" she cried. "Ah-h-h-h!" she wailed. "My twenty little babies! Oh-h-h-h!
Ah-h-h-h! Bz-bz-bz-z!"

Tommy felt very sorry for her.

"That was the gardener! Stupid man!" buzzed Mrs. Lady-bug. "Now he will pay money for sprays to kill the aphids. And my twenty babies would have killed them all for him free, and so much better! Oh-h-h-h! —Ah-h-h-h! Bz-bz-bz-z!"

"I must turn her mind to something else," thought Tommy.

"Mrs. Lady-bug," he asked politely, "how do you know which rose-bushes to live on? How do you know when the aphids are sucking them?"

The Lady-bug dried her tears with one of her purplish-brown legs. She cocked her head saucily.

"Oh, oh," she buzzed. "That is our secret. We know, we know. As soon as I was a grown-up Lady-bug with a red-and-black back, I knew I must find a husband. Then I knew I must fly around in the sunshine until I found this poor sick rose-bush. Then I knew I must lay my eggs here.

"Bz-z-z-z!" sang the Lady-bug. Suddenly

she caught Tommy up in her purplish-brown legs. Whirr! they flew through the air. Down they flew and bing! the next thing Tommy knew, he was big again.

A little red Lady-bug was just flying off his hand. Tommy Tiptoe thought he heard her say: "Bz-z-z-z! Just wait till to-morrow!"





Bright and early the next day, Tommy Tiptoe ran out of doors. The sun was shining. Some katydids were chirping in the grass.

"I think something exciting is going to happen," said Tommy Tiptoe, standing on his tippest toes.

And presto! whiff! biff! bang! There he was little again!

Giant plants were growing all around him, so green that even the air felt green. The plants were tall, like skyscrapers. Tommy



looked up at their tops. It made the back of his neck ache. All of a sudden, Tommy Tiptoe understood—they were blades of grass!

Tommy felt queer. He sat down on a pebble.

Then Tommy screamed. A Green Monster had dropped out of the sky above the green grass blades. The Green Monster was as big as a horse. He had three pairs of green legs. The hind legs were so long that their knee joints bent backwards above his body.

He had big green wings. His two eyes stuck out like big shiny balls. Each eye was like hundreds of little eyes stuck together. From between his eyes grew two long thin feelers.

The Green Monster touched Tommy with one of the feelers. Tommy screamed again.

"Oh, don't be frightened," said the Green Monster pleasantly. "I am Katydid Grasshopper. I wouldn't eat you. I don't like your smell."

Tommy couldn't help laughing.

"Why, Mr. Katydid Grasshopper," he cried, "how can you smell me without a nose?"

"You have only one nose and two nostrils. But look at mine!"

He waved his two long feelers. Tommy saw that there were little dents all over them.

"Those dents are my nostrils," said the Green Monster proudly. "Each of my feelers is a nose. I smell you with my feelers.

Oh, excuse me a moment or two, please."

"Certainly," said Tommy Tiptoe politely.

The Green Monster lifted his green wings. Tommy saw that they had veins like leaves.

"Oh," thought Tommy, "that's why, when he sits on a leaf, he look like a leaf, and nobody can catch him."

Then Tommy saw that the Grasshopper's wings were not wings after all. They were only covers for real wings underneath.

The Green Monster began to rub these wing covers together, at the ends where they grew from his body. It made a terrible noise. It shook Tommy all over. Again and again and again the Green Monster rubbed his wing covers together. The noise hurt Tommy's ears.

At last the Green Monster stopped. "Well," he said proudly, "how do you like my music? I was playing to my sweetheart across the way."

"But, Mr. Katydid Grasshopper," said

Tommy, "how can your sweetheart hear? She hasn't any ears."

"Oh, hasn't she?" cried the Green Monster.
"Huh! You humans are very proud of yourselves, aren't you? You think you're the
only pebbles on the beach, don't you? Just
because we don't have two silly ears on each
side of our head, you think—why, just look!"

The Green Monster waved his long feelers around until they touched a spot on his front legs, just below the knee. Tommy saw that it was a sort of hole.

"Are those your ears?" cried Tommy. He burst out laughing. "How funny! Ears in your legs! How funny! Ears in your legs! Oh ho ho ho!"

"Well," asked the Green Monster, rather angrily, "can you move your ears?"

"N-no," said Tommy sadly. "But a boy in school can wiggle his. I've tried to but I can't."

"Well, Katydids can," cried the Green Monster. "When we want to hear a noise better,

we just move our front legs nearer the noise."

"Is your lady Katydid answering?" asked Tommy. "I can't hear anything."

"Oh, no!" said the Green Monster. "Our ladies aren't musicians like us. Oh, but they're fine women, our Katydids.

"Why, one little mother lays two hundred eggs in her lifetime. And smart! You know they lay their eggs on twigs, but they do it at night because it's safer."

"Oh, I wish I could watch a Grasshopper egg hatch!" cried Tommy, standing on his tiptoes.

"This isn't our hatching season," said the Green Monster. "But one of my nephews is shedding his fifth skin to-day. When you human boys are of age, you vote. When our boys are of age, they shed their fifth skin. Climb on my back. It's only a hundred blades of grass away."

Up in the air jumped the Green Monster, with Tommy on his back. Up he jumped, down he jumped, up and down and up and

down and up and down. Tommy's stomach felt empty, the way it did on elevators and scenic railways. So he was glad when they stopped beside a bush.

Tommy saw a small pale Grasshopper holding tight to a twig with his fore-feet.

"Something's going to happen. Something's going to happen," the small pale Grasshopper was saying to himself.

Suddenly Tommy saw the skin on the grass-hopper's head split. Then the skin around his neck split. The Grasshopper didn't seem frightened. He just wriggled his head out of the old skin. Tommy could see a nice new green skin underneath.

Very, very carefully the young Grasshopper pulled his long feelers out of his old skin. All the time he kept pushing and pushing the old skin down with his mouth.

Then Tommy heard him say to himself: "I am tired. I think I'll take a little rest." After a while the young Grasshopper began

to jerk and wriggle again. Slowly, slowly his front legs came out of the old skin. Slowly, slowly his middle legs came out. Slowly, slowly his hind legs came out. Now all of him was out.

He was pale green. He had little new beginnings of wings, folded up like a fan.

The old worn-out suit still stood behind him on the twig, like a ghost Grasshopper. The real Grasshopper turned around and began to eat it! When he had eaten every scrap of his old clothes he gave a high jump into the air.

"I'm grown up! I'm grown up!" he cried. With one more jump, the young Grasshopper was gone.

Suddenly Tommy felt himself grow big again. A little green thing was hopping away through the short grass at his feet. Tommy thought he heard it say: "Just wait till to-morrow."



Tommy Tiptoe woke up very excited. He stood on his tiptoes and ran out of doors. But nothing happened. He waited and waited. But nothing happened. So to keep from crying, Tommy ran down to the pond to watch the dragon-flies.

Whiff! they flew here and whirr! they flew there! They whizzed so fast it made Tommy feel cross-eyed to watch them. Sometimes the dragon-flies looked blue. Sometimes they looked green. Sometimes they looked red.



Sometimes they looked purple. Sometimes they looked purple and red and green and blue all together, like a rainbow or a soap-bubble.

Tommy was standing on his tippest toes to watch when, oh, my goodness! bang! he fell in.

Down, down, down through the water he fell. And as he went he grew smaller and *maller* and *smaller*. When Tommy hit the bottom he was only one inch high.

Thick tree trunks were growing out of the

slimy bottom of the pond. (Of course they were only weeds.) They grew up and up and up and up and disappeared through the top of the water. The top of the water looked like a wiggly green cover with green light shining through.

Then Tommy saw an ugly Dragon with six legs crawling, crawling, crawling over the bottom of the pond. It was larger than Tommy. It had a big head and big poppy shiny eyes. It looked like a big gray spider with a big gray bulldog face.

Tommy started to scream. Then he saw that the Gray Dragon was not coming for him. It was going after a worm. Then—you could never guess what the Gray Dragon did next! It unfolded its bulldog face!

Yes, the buildog face was not the Dragon's real face at all. It was only a false-face! The false-face hinged on to the Dragon's lower lip. It had been folded up over the real face so that the worm wouldn't know who was coming!

Quick, quick! the Gray Dragon stuck out

its false-face. It looked like a long gray tongue with two sharp points on the end, like teeth. The Gray Dragon stuck these sharp points into the worm. Then it bent its false-face back to its real mouth and ate the worm with its real teeth.

"Oh! Oh!" cried Tommy Tiptoe, standing on his tippest toes, as well as he could in the slime. "Oh, Gray Dragon, who are you?"

"Why," answered the Gray Dragon, "I'm a Little Girl Dragon-fly."

"But—but—" began Tommy.

"Oh, yes, I know I'm ugly now," said the Gray Dragon, "and I haven't any wings. But next summer when I'm grown up, I'll be beautiful like my mother and I'll have rainbow wings like hers."

"Oh, does your mother live here?" cried Tommy Tiptoe. "Where is she?"

"Dead, I guess," said the Gray Dragon. "So is my father. Dragon-fly grown people live only five or six weeks, you know. And they never come back under the water."

"But, Little Girl Dragon-fly," asked

Tommy, "how did you get down here, then?" "Huh!" said the Gray Dragon. "You don't know much, do you?"

"I do so!" cried Tommy Tiptoe crossly. "I know reading and writing and arithmetic—"



"Pooh!" said the Gray Dragon. "Pooh! What's that? You've watched my great-grandfathers and grandmothers and uncles and aunts and cousins flying on this pond every summer. And you don't even know how we're born!

"Well, I'll tell you how. One day this summer my mother flew to the water and laid about five hundred eggs. They dropped down to the bottom stuck together. After a month we all hatched out and began to eat and we have been eating and eating and eating and grow and grow and grow and shed some skins and we'll stay here all winter. Then next summer, hurray! we'll climb up to the top of the water and be real dragon-flies!"

"Climb up!" cried Tommy Tiptoe. "How?"

"I told you you didn't know much," said the Gray Dragon. "Up one of the weeds, of course, stupid boy. Look, there's one of the big boys who lived here all last winter, just getting ready to climb up."

Tommy saw a big Gray Dragon climbing slowly up one of the thick weed trunks. Bing! Tommy jumped up and grabbed him by his pointed end. Up, up, up the slippery stem the young Dragon-fly pulled Tommy, up and up and up. Little fishes swam past them.

The green top of the water grew lighter and lighter.

At last the Dragon-fly stuck his head out of the water into the air. Then he pulled his whole self out, and Tommy with him. The Dragon-fly held tight to the stalk. So did Tommy.

Then Tommy saw the Dragon-fly begin to shed his skin. He shed it just like Katydid Grasshopper. Only the Dragon-fly didn't eat his old suit. He left it behind him. As soon as he was free, he stretched out his four new rainbow wings and away he flew.

Whiff! Tommy saw him double up all his legs under him like a basket, and whiff! there was a mosquito caught inside. The Dragonfly ate the mosquito.

Then whiff! he caught a fly in his leg basket. He ate the fly. All this time the Dragon-fly never stopped flying.

"It must feel funny to eat your dinner flying in the air," said Tommy out loud to himself. "I wonder if he ever stops flying."

The Dragon-fly must have heard, for he flew back and began to sing:

"Oh, I, oh, I am the dragon-fly.

Here I fly, there I fly, very high, high!

And I do everything on the fly, fly, fly!

On the fly, ha! ha! On the fly, ho! ho!

That's a joke, that's a joke, but it's true, you know!

Why, I hunt on the fly,

And I eat on the fly,

Why, I marry on the fly,

On the fly, on the fly.

And my wife lays her eggs on the fly, fly, fly! Oh, I, oh, I am the dragon-fly,

Watch me fly, watch me fly, watch me fly, fly, fly!

Watch me fly, fly, fly, fly, fly, fly, fly!"

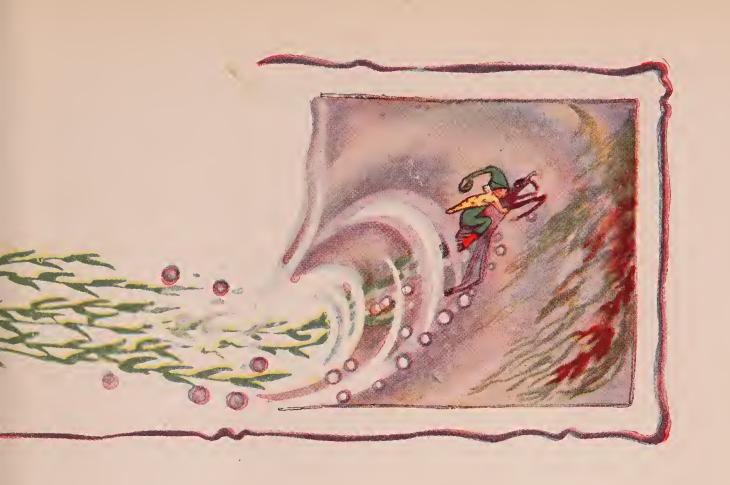
As the Dragon-fly sang the last words he caught Tommy up into his leg basket, and whiff! whirr! off he flew to the other side of the pond. He set Tommy down, and that very minute Tommy grew big again. Beautiful Dragon-flies were still flying about the water. Tommy thought he heard one of them singing: "Just wait till to-morrow!"



Of course, as soon as he had eaten breakfast the next morning, Tommy Tiptoe ran back to the pond.

But the Dragon-flies paid no attention to him. Here they flew, there they flew. But not one of them spoke to Tommy.

Then Tommy noticed dozens of little black bugs racing on the pond. They took funny long steps with their long thin black legs. They ran so lightly that their feet barely made dents in the water. Where the pond was shallow, Tommy could see their shadows racing about on the bottom.



"Water-skaters!" said Tommy. "Wouldn't it be fun to ride on a Water-skater's back!"

Presto! somehow he turned little again. Bing! there he sat on a big Water-skater!

The air whistled past his ears, as they raced from one end of the pond to the other! Tommy saw that his Water-skater's back was not black. It was covered with brown fuzz. Now and then a drop of water as big as Tommy's head splashed on the brown fuzz, but it splashed off again, like water from a duck's back.

"Why, Mr. Water-Skater!" cried Tommy.

"You're not skating with your legs. You're rowing with them!"

Sure enough, the Water-skater's long middle legs and his long hind legs were pushing against the water like oars. His body was the boat.

"Excuse me!" said the Water-skater suddenly. "I must do my marketing."

Whiff! he made such a jump that Tommy nearly fell off his fuzzy brown back. He had caught a small insect in his short fore-legs.

"Now, I'll eat my lunch," said the Water-skater. "This is the first course. Will you join me?"

"No, thank you, sir," said Tommy politely.

The Water-skater stuck his sharp beak into the insect and sucked. That was the way he ate. Then he began to race back and forth as before.

"Mr. Water-Skater," said Tommy after a minute, "would you please stop moving your stomach up and down? It makes me feel funny."

"Silly boy!" cried the Water-skater, rowing

more quickly with his long legs. "Would you please stop breathing?"

"I—I can't," answered Tommy.

"When I move my stomach up and down, I'm breathing."

"Oh, Mr. Water-Skater!" cried Tommy, almost standing on his tiptoes in the air. "Do you have funny little nostrils in your feelers, like Katydid Grasshopper? And does the fresh air come in through them?"

"Great Jumping Grasshoppers!" cried the Water-skater crossly. "You people are stuck up! You think everybody has to be made like you. Of course I have nostrils on my feelers, like all insects. But they're to smell with. I don't breathe with them. And I don't breathe through my mouth either. That's to eat with. I have something very special for breathing. Look-a here!"

Tommy saw openings like buttonholes along the Water-skater's sides. Little hairs grew all around each opening like a fringe.

"Those are my spiracles," explained the

Water-skater. "All we insects breathe that way. Now, when I move my stomach in—the way you don't like—I'm pushing out all the used-up air, and taking in new air. When I move my stomach out—the way you don't like—my spiracles close. Then the air runs around through little air-veins inside of me, and keeps my blood nice and clean."

"But what are the hairs for, Mr. Water-Skater?" asked Tommy.

"Oh, that's a little filter to keep out dust and things. You've got hairs in your nose, haven't you? They're your dust-filter."

"Oh, Mr. Water-Skater!" cried Tommy, trying his best to stand on his tiptoes. "It's so exciting! Please talk some more."

The Water-skater was so pleased that he began to row faster than ever.

"Well, Boy," he called back over his shoulder, "what else do you want to know?"

"Let's see," said Tommy. "Well, Mr. Water-Skater, can you go under water?"

"Certainly, hold on tight!" cried the Waterskater. And with that, down he dived,

grabbed an insect off the bottom of the pond in his front legs, and was up again in the air, while Tommy held his breath.

"Next October," explained the Water-skater, while he sucked the second course of his lunch, "we'll all go down and hide in the mud on the bottom till spring."

"Whew! And hold your breath all winter!" cried Tommy.

"Stupid!" said the Water-skater crossly.

"Of course not. We have extra breathing gills, the fresh air in the water gets separated. Then it runs around inside of us like any other air. Any more questions, Boy?"

"Er-er—" began Tommy timidly. "Er-er, I'd like to know, sir, if you have a skeleton inside of you, like mine."

"Yes," said the Water-skater. "No," said the Water-skater. "Yes and no, Boy," said the Water-skater. "I have a skeleton, but it's not inside. You're looking at my skeleton now."

Tommy looked and looked and looked till his eyes hurt.

"I don't see any skeleton, sir," he said.

"Oh, no, of course not!" answered Mr. Water-Skater. "You people think everybody's skeleton has to be just like *your* skeleton.

"Listen, Boy. An insect's body is like a lot of rings stuck together. My outside skin is soft between the rings, but all around my rings, it's hard like bones. And those hard places are my skeleton. They keep my stomach and heart and things inside of me from getting hurt. So you see, my skin is my skeleton and my skeleton is my skin."

"Oh!" said Tommy. "I see. Oh! Mr. Water-Skater, please have you a heart like mine?"

"A heart! A heart! One measly little heart like yours!" cried the Water-skater proudly. "No, Boy. I've got eight little hearts, all in a row pumping blood into each other. When the blood comes out of the last heart, why, it just runs around, loose, inside of me, instead of veins, like yours."

"Whew!" said Tommy. "Whew! I didn't know insects were so exciting!"

"Boy!" cried the Water-skater, racing to the

other side of the pond. "I can't waste time being anybody's school-teacher. I must go about my business. But honestly, you people make me tired. You think you're so smart just because you can read and write! And you don't even understand us insects right under your nose. Good-bye, Boy!"

Bing! the Water-skater slid Tommy off his fuzzy back so quickly that he had to grab a blade of grass on the bank.

And presto! Tommy was big again. Dozens of little black Water-skaters were racing about the pond, as busy as ever.

"To-morrow!" they seemed





All next morning, Tommy Tiptoe played out of doors. He saw a Lady-bug on a rose-bush. But he did not brush her off, because he remembered about the wicked aphids.

He heard a Katydid sing.

"Mr. Katydid Grasshopper is rubbing his wings together," thought Tommy Tiptoe.

He watched the beautiful Dragon-flies whirring here and whirring there over the pond.

"Just think!" thought Tommy. "You used



to be nothing but ugly little Gray-Dragons!"

He saw dozens of long-legged Water-skaters racing over the pond.

"You're not walking with your legs. You're rowing," thought Tommy to himself. He felt very proud.

"It's fun to know so much," said Tommy Tiptoe. "Oh, I hope——"

Bing! There he was little again!

Once more the grass blades were tall like skyscrapers. The tiniest pebbles looked as

big as his head. Among the pebbles Tommy saw something round and fat. It looked like a seed. It was so tiny that he had not seen it before he grew little. Now it seemed bigger than his own foot.

The seed was shiny black, like a polished shoe. There was a white stripe on one side.

Then—you could never guess what happened!

The top of the black seed began to move! Then the top came off like the lid of a sugar bowl! Something alive was coming out!

First came two long green feelers. Then came a green head with big eyes. Then came two long thin green legs. Then, slowly, slowly came a long thin green body. The body seemed to stretch longer and thinner as it moved out.

Then came two more long thin green legs. The body was almost all out now. But it seemed to be having a hard time with its hind legs. They stuck to the egg. (For of course the black seed was not a seed at all. It was an insect egg!) The body wiggled and wrig-

gled and jerked. It pulled and pulled. At last it pulled one of the long thin green hind legs free.

Then—"Oh!" cried Tommy.

The body had given one last pull. It was all out of the egg. But its last long, thin, green hind leg had broken off!

"No matter!" Tommy heard the insect say cheerfully to itself. "I'll grow another in a few weeks, when I shed my skin."

And the insect began to move over the ground. It looked exactly like a long green stick walking.

"Oh, Mister!" cried Tommy. "Who are you?"

The green stick turned and looked at Tommy with its big eyes.

"You're a funny-looking insect," it said.
"So fat! Not thin and stylish like me. I'm not a Mister. I'm a Little Girl Walking Stick, just born. Whew! it's good to get out of that egg. I've been there all winter."

"Why, I never heard of a Walking Stick insect before!" cried Tommy standing on his

tiptoes. "I guess there are not very many of you."

"Humph!" answered the Girl Walking Stick. "Guess again. There are hundreds of us around you all the time. Only we're so smart you can't see us. Watch me!"



Tommy watched the Girl Walking Stick climb up a blade of grass. She stuck her front legs straight out, close to her head, and stood very still. If Tommy had not known she was there, he could not have seen her. She looked like part of the grass blade.

"Look!" said the Girl Walking Stick. She held out one long thin green leg. Tommy saw that her foot was two sharp hooks, with a little soft cushion in between.

"With six sharp feet like that, you can hold on ever so long," said the Girl Walking Stick. "And if anybody bothers me, why——"

She fell off the blade of grass suddenly. Her six legs stuck out every which way. She lay very still. She looked exactly like a piece of dried-up grass.

She lay there so long that Tommy was beginning to be afraid the Walking Stick was really dead. At last she got up.

"You've passed dozens of Walking Sticks like me," she said. "But you never see us because we look like sticks. Being a Walking Stick insect is as good as having an invisible cloak. Well, good-bye now. I'm hungry. I must find me a good oak leaf to chew."

"Oh, Miss Walking Stick!" cried Tommy, catching hold of her. "Please take me with you!"

The Walking Stick moved slowly between

the tall blades of grass, pulling Tommy with her. After a long time she stopped before a high mountain. The mountain went straight up in the air. It was made out of something hard and brown, with big cracks in it, like roads.

The Walking Stick began to crawl up one of the roads, straight up and up. Tommy held on tight. They turned a corner. The mountain grew narrower. Tommy saw strange big green things moving everywhere. The green things seemed to be fastened to the mountain.

The Walking Stick crawled on to one of the green things. She began to nibble at it.

Then Tommy understood. They had climbed up an oak tree! They were standing on an oak leaf!

The Walking Stick nibbled and chewed and nibbled and chewed. Her jaws were very sharp. She was making holes in the leaf.

"Um-m-m! It's good," said the Walking Stick with her mouth full. "I'm going to eat

and eat and eat so that I'll grow and grow and grow. Then pretty soon, I'll shed my skin."

"And then what?" asked Tommy Tiptoe.

"Oh," answered the Walking Stick, "then I'll eat and eat and eat some more, and grow and grow and grow some more. Then I'll shed another skin."

"And then what?" asked Tommy Tiptoe.

"Oh, then I'll be grown up," said the Girl Walking Stick. "And I'll get married. And I'll lay some black eggs, like that one I came from."

She began to nibble and chew again.

"Do you eat insects like the Dragon-flies?" asked Tommy.

"No, indeed!" answered the Girl Walking Stick, with her mouth very full. "No, indeed! I don't like meat. I'm a vegetarian. Breakfast, dinner, afternoon-tea, and supper, all I eat is green things. That's why I'm colored green, so you can't catch me eating up your oak leaves."

"Oh," said Tommy. Then he thought of something.

"Oh ho, Miss Walking Stick," he cried, feeling very smart, "but when the leaves begin to turn brown, in the fall, then we'll catch you!"

"Oh ho, Mister Tommy!" answered the Walking Stick. "You're not as smart as you think. When the leaves turn brown in the fall, then I turn brown too—ha! ha!"

"Oh," said Tommy Tiptoe, "I see. Well, Miss Walking Stick, will your husband's suit turn brown too?"

"Oh, maybe it will and maybe it won't," answered the Girl Walking Stick carelessly. "It doesn't matter much about him. I'm the important one. If I get caught and die before I lay my eggs, then there won't be any little new Walking Sticks in the world. And that's all that counts, you see."

"Oh!" said Tommy. "I see."

"Jump!" cried the Walking Stick suddenly. "That leaf next door is just getting ready to fall! Jump over to it, quick, if you want to get home to-day."

Tommy jumped. He held on tight to the

stem of the big green leaf. Whiff! off it floated gently, like a green magic carpet. Slowly they settled on the ground. The minute Tommy's feet touched—bing! he was big again.

Tommy looked and looked and looked up into the oak tree. But he could not see the Walking Stick. He looked and looked and looked through the grass blades at his feet. But if any of the Walking Stick's brothers and sisters were there, they were too smart for him. He could not see them.

Tommy felt very excited.

"I wonder what will happen to-morrow," said Tommy Tiptoe.



Tommy Tiptoe loved to run out in the dew and count the new morning-glories on the fence. Sometimes he picked them for his mother. This morning he had just started to pull a lovely purple one when—

"Bz-z-z!" sang something close to his ear.

"Wow!" thought Tommy and dropped his hand. For a bee had settled on the morning-glory. But before Tommy could run, bing! there he was, little again!

Up, up, up rose green tree trunks twisted



together. Of course, Tommy knew they were the morning-glory vine. Out of the tree trunks, far above his head, grew silky purple horns, as big as apple trees. Of course Tommy knew they were morning-glories. High in the air, a fat giant brown bird was making a noise like a sawmill. Of course Tommy knew what it was.

"Bee! Bee!" yelled Tommy, with his hands to his mouth.

"Bee! Bee! If I climb up there, would you sting me?"

"Bz-z-z!" sang the Brown Bee. "Bz-z-z! I'm too b-b-busy—bz-z-z—to sting people unless they b-b-bother-r-r me! Bz-z-z."

So up a green tree climbed Tommy Tiptoe and out on to the giant flower.

The Bee looked funny and round and fat. She was covered with brown fur. Her two shiny eyes stuck out like headlights on an automobile. She was sucking up honey through a long nose like an elephant's trunk. Now and then she stuck out her long, hairy tongue.

"You must be hungry!"

"I'm not eating," said the Bee, "I'm marketing. I'm swallowing honey into a little bag inside of me, so I can carry it home."

"Oh, just the way camels carry water," cried Tommy, standing on his tiptoes. He felt very excited. "Oh, Bee, won't you take me home with you? Only I'd rather not be swallowed."

"Bz-z-z!" sang the Bee. "Bz-z-z! Climb into my pollen basket. I'm not carrying any pollen this trip."

The Bee held out her hind leg. Tommy saw a hollowed-out place there, like the inside of a canoe. The Bee helped Tommy in with her middle legs. Then, bz-z-z! off she flew. Tommy felt safe because stiff hairs stuck out all around the pollen basket and held him in like a railing.

Bz-z-z! Tommy understood the buzzing noise now. It was the noise of the Bee's wings' moving fast, fast, faster than a windmill.

Whizz! Bz-z-z! Bz-z-z! Down they flew and stopped before a big white house. There were no windows in the house but there was a wide front door. Bees were hurrying in and out of the door. Tommy's Bee walked in.

The House without Windows was so dark that at first Tommy could not see anything at all. The air smelled sweet and the darkness was full of sounds. Something tickled

Tommy's face. He wiggled in the Bee's leg. "That's just one of our watchmen touching you with his feeler," explained Tommy's Bee. "He has to watch out for enemies like yellow-jackets and moths."

The Bee seemed to be walking straight up a wall. Tommy's eyes were used to the dark now. He saw that they were on a wax ceiling, turned sideways. It had hundreds of little wax rooms on it. The little ceiling of each room was part of the big ceiling. Every room had six walls and no floor. As far as Tommy could see, up and down and right side and left side, there were little six-sided rooms, little six-sided rooms, little six-sided rooms. It made him feel dizzy.

The Bee walked into a room with Tommy. She walked in head first, with her feet on one of the walls. She began to chew. She chewed and chewed and chewed, like a cow. After a while a drop of honey came out of her mouth. The drop swelled up bigger and bigger. It touched the little ceiling. Then another drop came and another and another.

The Bee moved her head from side to side until the honey was spread all over the ceiling.

Tommy understood now. The big wax ceiling turned sideways was a honey comb. It was hanging from inside a white box that bees lived in. The little six-sided rooms were honey cells. Mother bought comb honey like that and they ate it for Sunday night supper! He was in a bee hive!





"I'm going into the empty cell next door and take a nap now," said Tommy's Bee. "But I'll get one of my little sisters to show you around."

She called another Bee. The other Bee took Tommy in her mouth. Then she picked him out again with her middle legs and set him into the pollen basket on her own hind leg. Then she began to walk around.

They passed many other Bees. Some were



cleaning house, carrying out bits of dirt. Some were packing pollen in cells. Everybody seemed very busy—all except a crowd of fat, lazy fellows with big eyes. They did nothing but stand around and look silly.

"Why don't those Bees work?" asked Tommy Tiptoe.

"Oh, those are the Drones," answered his Bee. "Drones never work. Drones are bee men. They just hang around and wait until the Queen chooses one of them for a husband."

Tommy saw a Bee walking from one cell to another. She looked different from the other bees. Her body was long and thin, and her eyes were bigger. At each cell she stopped. Other Bees walked around her. Now and then a Bee came up with food in her mouth. The Queen stuck her long tongue into the Bee's mouth and ate. Then she began to walk again.

"Who is that?" whispered Tommy.

"Sh-h! That's our old Queen," said the Bee. "She's laying eggs. She lays one in each cell, except the cells where we keep honey and pollen. Some of the eggs will be Drones and some will be Workers. The Queen is so smart she knows which is which."

Tommy noticed something that looked like a wax thimble sticking out from the honey comb.

"Miss Bee," he asked, "what's that?"

"Sh-h!" said the Bee. "That's the cell where our little new Queen is getting ready to come out. She feeds on bee jelly all the time

—no common bee bread for her. That's what makes her grow into a Queen."

"Are you a Queen?" asked Tommy.

"Great beeswax—no!" cried the Bee. "I'm a Worker Bee. I'm a sort of lady, only I never have any children.

"I'm helping to nurse the Queen's children. When I'm older I'll be a Worker Bee and go marketing outdoors. Great beeswax!" cried the Nurse Bee. "I almost forgot! It's time to feed those babies now!"

The Nurse Bee walked over to a cell. Tommy saw a little pale worm curled up inside. The Nurse took some white jelly out of her mouth and fed it to the baby.

"The little darling is going to be a worker. But it has just hatched so it can't eat anything but bee jelly for a few days," said the Nurse. "Now that worker baby next door is fed on bee bread—it's nearly grown, you see."

Tommy looked next door. Three Bees were building a wax cover over the cell. They pushed the wax with their feet and licked it with their long, hairy tongues.

"Oh!" cried Tommy. "Poor little baby!

It will smother and starve to death!"

The Nurse Bee laughed. "Silly!" she said. "The air comes through the wax cover. And the nurses have filled the cell with bee bread. You see, that baby wants to be left alone now, to spin its cocoon. When it comes out of the cocoon it will eat its way right through the wax cover."

"Where do you get wax? And what's bee bread?" asked Tommy.



"Great beeswax!" cried the Bee. "Don't you even know that? Well, I'll explain about the wax another day. But bee bread—why, that's just honey and pollen mixed together."

"What's pollen?" asked Tommy.

"Pollen! Pollen! Great beeswax! The boy doesn't know what pollen is!" cried the Bee. "Here, Boy!"

The Nurse Bee carried Tommy to the empty cell where the first Bee was taking a nap. The next thing Tommy Tiptoe knew, the first Bee was walking down the honeycomb with him and out of the darkness into the sunshine again. Bz-z-z! off flew the Bee with Tommy safe in her pollen basket. They lighted on something soft that smelled very sweet. It looked like a yellow giant trumpet. Out of the middle of the trumpet grew five long yellow stems with yellow balls on the ends.

"Why, where are we?" cried Tommy Tiptoe.

"On a yellow honeysuckle," said the Bee. "See those long yellow things? They're sta-

mens. See those bags on the ends? They have pollen inside. Now, watch me while I go down inside the honeysuckle to suck honey."

Tommy watched. As the Bee went in, she brushed against the yellow bags. The pollen fell out like dust and stuck to the Bee's brown fur. When she came out, the pollen stuck to her again. The Bee cleaned off the pollen with her front legs and her middle legs. Then she pushed it down into the pollen basket on her other hind leg.

"Now, Boy," she cried, "you know what pollen is. And now, Boy, I'm a bz-z-busy-z-z bee and I must fly home."

Tommy nearly fell out of the pollen basket. "Oh, Miss Bee, Miss Bee!" he cried. "Oh, Miss Bee, take me with you!"

"Bz-z-z!" sang the Bee. "Bz-z-z! I'm too bz-z-busy-bz-z-z! But I tell you. There's going to be a big, buzzing, exciting bee holiday soon, when our new Queen gets married. I'll come and get you, and you can watch everything. Bz-z-z! Bz-z-z!"

Bz-z-z! Down to the ground flew the Bee. She pushed Tommy out of her pollen basket. Tommy's feet touched the ground, and bing! that minute he was big again.



The next day and the next day and the next, Tommy waited. Every time he heard bz-z-z! he got excited. But his Bee did not come.

A week went by. Still his Bee did not come. Then one day——

"Bz-z-z!" came a noise close to his ear. Something brushed against Tommy's cheek. Bing! bang! there he was, little again.

But who was this fat brown stranger look-



ing at him lazily with such big shiny eyes?
"I'm a Drone," buzzed the brown stranger.
"Your friend the Worker Bee was busy making wax, so she sent me."

"Thank you, sir," said Tommy politely. He started to climb into the pollen basket on the Drone's hind leg. But there was no hollow place there.

"Oh," said the Drone lazily, "we don't have pollen baskets. Drones don't need 'em, you

see. We never gather pollen. Just climb on my back."

Bz-z-z! off they flew.

"Bz-z-z!" buzzed the Drone. "I'm all excited to-day. Our new Queen is going to choose her husband. Bz-z-z! I hope she'll choose me."

Down they flew to the House without Windows, and through the wide front door into the darkness inside. A Bee watchman tickled Tommy's face with her feelers.

"Your friend is over on the other side of the hive, helping to build a new comb," said the Drone, yawning.

"Oh, please sir, take me over," cried Tommy.

"Aw, it's too much like work," yawned the Drone. "But—here, you!" He called a Worker Bee. "Take this boy over to the wax works, like a good girl, will you?"

So Tommy climbed into the Worker Bee's pollen basket. She carried him to the other side of the hive, where there was an empty space.

Dozens and dozens of Bees hung down from the roof of the hive, like ropes. They held on to each other by their feet. He saw his old friend the Worker Bee. She did not speak to him.

"Making wax," said Tommy's new friend. "Hard work."

"Wax! Hard work!" cried Tommy. "But they're not even moving."

"Oh, its getting made inside of them," said the Worker Bee. "First they brought a lot of honey home in their little stomach sacs. Now they're making themselves all hot inside. Whew! it's warm here. Soon the honey will turn to wax. Look!"

Tommy looked at his old friend. Little drops were coming out of her stomach like perspiration. The drops got hard. They turned into wax! The wax came out slowly like thin pieces of paper that somebody was pushing through cracks in the Bee's stomach.

The Bee picked off the wax with her hind legs. She put it into her mouth. Then she began to pull and chew the wax.

"Just like pulling taffy!" said Tommy.

Thin sheets of wax were coming out of all the other Bees. The air felt very warm. Each Bee took his wax and worked it like taffy.

"Now watch!" said Tommy's Bee.

A Bee flew over to Tommy's old friend and took the wax from her mouth. She flew up and pressed the wax tight against the roof of the hive.

Another Bee flew up and pressed a piece of wax tight against the first piece.

Another Bee and another and another flew up with more wax until there was a big lump on the roof. All this time, other Bees still pulled and chewed their wax.

Then another Bee came without wax. She burrowed into the lump with her head. She licked it with her long hairy tongue. She patted it with her jaws. Her jaws looked like funny little shovels on the ends.

"Oh!" cried Tommy. "She's making a hole!"

The first Bee stopped. Another Bee

came and worked awhile. Then another Bee came, and after that another and another. The hole in the wax grew bigger. Tommy saw that it was beginning to have six sides.

"Why, it's a honey cell!" cried Tommy.

"Of course," said his Bee. "They're making a new comb. They'll build another cell and another and another until it's finished. But come along if you want to see our new Queen start on her wedding trip."

"Miss Bee, did your old Queen die?" asked Tommy.

"No," said the Bee. "But we can only have one Queen at a time. So when the new Queen was born, the old one flew away.

"She took some of her people with her so she could start a new hive. Some new Queens kill the old Queen, but ours didn't."

The Worker Bee carried Tommy out of the dark hive into the sunshine again.

Bees were flying and walking and buzzing about. They seemed very excited, especially the Drones. The Drones buzzed very loud and flew around in circles.

The new Queen was walking up and down in front of the hive. She seemed sorry to go. She looked at everything very hard with her big eyes. She touched everything with her feelers.



"You see," whispered Tommy's Bee, "she's never been outside of the hive before. She's trying to remember everything so she won't go to the wrong hive when she flies back."

The Queen Bee began to fly around in a little circle. She came back. She flew around in a bigger circle. She came back again.

The Drones were getting more and more excited.

"Bz-z-z!" sang each Drone very loud.
"Bz-z-z! I hope she'll choose me—me-e-e-e,
me-e-e-e, m-m-m-m-m-e-e-e-e!"

Suddenly the Queen Bee flew straight up in the air. Oh, how fast she went! Whirr! Straight after her flew the Drones, like a cloud.

Tommy's Bee started after them but she could not fly fast enough. The whirring grew fainter and fainter until the Queen and the cloud of Drones disappeared in the air.

"We'll wait here," said Tommy's Bee, flying back to the front door.

It seemed a long time. At last they saw the Queen. She flew nearer and nearer. She made circles around the hive. Then she walked very quietly through the front door.

"Why, where's her husband?" asked Tommy.

"Oh, he's dead," answered the Worker Bee. "He died up there in the air. Bee husbands always die as soon as the wedding's over.

We can't have the lazy fellow hanging around here doing nothing. The Queen can't be bothered with him either. She must spend all her time laying eggs now."

"Poor husband!" said Tommy.

"Poor husband, nothing!" cried the Worker Bee angrily. "Didn't our Queen choose him from all the other Drones? That's all he was living for. He didn't mind dying. All the other Drones will die pretty soon anyway. And think of all the nice little babies the Queen is going to have now!"

"But it seems kind of mean," said Tommy.

"Huh!" snapped the Worker Bee. "You people always think your way is best. You expect everybody to act like men and women. We're not people. We're Bees. We live our own Bee way. It's just as good as your way, only you can't understand it."

"Oh, excuse me, Miss Bee," begged Tommy. "I——"

"Bz-z-z!" sang the Bee. "Bz-z-z!" She pushed Tommy out of her pollen basket, and—

Bing! He was big again. Over in the neighbor's garden stood a row of bee-hives. He had been inside one!

* * * * * * *

That night Tommy Tiptoe dreamed a dream. He was lying in soft grass. His body felt warm and happy in the sun. Suddenly he heard a buzzing far, far away. The buzzing came nearer. Things were flying and hopping through the air. The things came nearer, nearer, nearer.

"Bz-z-z!" sang the things.

Tommy looked. There were all his insect friends! Whiff! they clasped legs in a circle and began to dance.

"Bz-z-z!" sang the insects, and whirr! they flew, round and round.

The red Lady-bug held the green Katydid by the leg, and the green Katydid held the beautiful Dragon-fly, and the beautiful

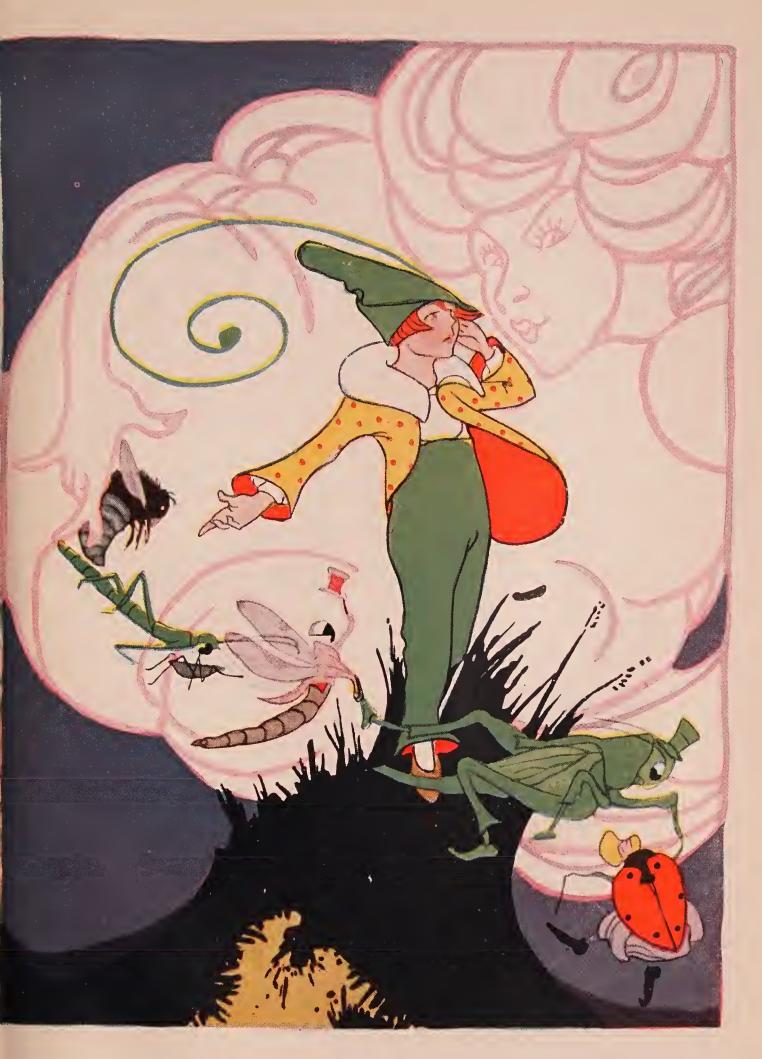
Dragon-fly held the funny Water-skater, and the funny Water-skater held the thin Walking stick, and the thin Walking stick held the fat brown Bee, and "Bz-z-z!" they sang, and whirr! they flew, round and round.

"Tommy Tiptoe!" said a Voice. The Voice seemed to come from high in the sky and low on the earth, and it sounded like trees rustling and water rippling, and it was very far away and very beautiful.

"Tommy Tiptoe!" said the Voice. "You have learned the secrets of my little children. Do you want to learn more secrets, Tommy Tiptoe?"

"Yes, ma'am—sir!" yelled Tommy very loud.

"Then," sang the beautiful voice, "out of doors with you, Tommy Tiptoe, and keep your eyes open. When you play in the sunshine, keep your eyes open. When you walk in the dark woods, keep your eyes open. When you wade in the little brooks, keep your eyes open. Out of doors with you, Tommy Tiptoe, and keep your eyes open!"



"Bz-z-z!" sang the insects and whirr! they flew round and round. "Bz-z-z! Bz-z-zzzz!" they sang, louder and louder and louder. Whirr! Whirr! they flew round and round, faster, faster! Whirr! whirr! whirr! whirr! whirr! whirr! whirr! whirr! whirr!

Bing! Tommy woke up.

It was morning. The sun warmed his little white bed. The birds sang. A breeze blew the little white curtains at the windows.

Up jumped Tommy Tiptoe.

"Out of doors, out of doors!" he sang to himself as he dressed. "Eyes open, open, open, open! Secrets, secrets!" he sang to himself.

Then whiff! out into the sunshine on his tip tiptoes ran Tommy Tiptoe.







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